

Petroleum and related products — Determination of the ageing behaviour of inhibited oils and fluids — TOST test —

Part 3: Anhydrous procedure for synthetic hydraulic fluids

The European Standard EN ISO 4263-3:2006 has the status of a British Standard

ICS 75.120

National foreword

This British Standard is the official English language version of EN ISO 4263-3:2006. It is identical with ISO 4263-3:2006.

The UK participation in its preparation was entrusted to Technical Committee PTI/13, Petroleum testing and terminology, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
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Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to iv, pages 1 to 21 and a back cover.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Foreword

This document (EN ISO 4263-3:2006) has been prepared by Technical Committee ISO/TC 28 "Petroleum products and lubricants" in collaboration with Technical Committee CEN/TC 19 "Petroleum products, lubricants and related products", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2006, and conflicting national standards shall be withdrawn at the latest by August 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 4263-3:2006 has been approved by CEN as EN ISO 4263-3:2006 without any modifications.

INTERNATIONAL STANDARD

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Part 3:

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*Pétrole et produits connexes — Détermination du comportement au
vieillessement des fluides et huiles inhibés — Essai TOST —*

Partie 3: Méthode anhydre pour les fluides hydrauliques synthétiques



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4263-3 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

ISO 4263 consists of the following parts, under the general title *Petroleum and related products — Determination of the ageing behaviour of inhibited oils and fluids — TOST test*:

- *Part 1: Procedure for mineral oils*
- *Part 2: Procedure for category HFC hydraulic fluids*
- *Part 3: Anhydrous procedure for synthetic hydraulic fluids*
- *Part 4: Procedure for industrial gear oils*

Petroleum and related products — Determination of the ageing behaviour of inhibited oils and fluids — TOST test —

Part 3: Anhydrous procedure for synthetic hydraulic fluids

WARNING — The use of this part of ISO 4263 may involve hazardous materials, operations and equipment. This part of ISO 4263 does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this part of ISO 4263 to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This part of ISO 4263 specifies a method for the determination of the ageing behaviour of synthetic hydraulic fluids of categories HFDR, HFDU, HEES and HEPG as defined e.g. in ISO 12922^[4] and ISO 15380^[5]. The ageing is accelerated by the presence of oxygen and metal catalysts at elevated temperature, and the degradation of the fluid is followed by changes in acid number. Other parts of ISO 4263 specify similar procedures for the determination of ageing behaviour of mineral oils and specified categories of fire-resistant fluids used in hydraulic and other applications.

NOTE Other signs of fluid deterioration, such as the formation of insoluble sludge, catalyst coil corrosion or decrease in viscosity, can occur, which indicate oxidation of the fluid, but are not reflected in the calculated oxidation lifetime. The correlation of these occurrences with field service is under investigation.

This test method can be used to compare the oxidation stability of fluids that are not prone to contamination with water. However, because of the large number of individual field-service applications, the correlation between the results of this test and actual service performance can vary markedly, and is best judged on experience.

The precision of this test method for synthetic hydraulic fluids is not known because interlaboratory data are not available. This method might not be suitable for use in specifications or in the event of disputed results as long as these data are not available. However, precision for inhibited turbine oils is given in Clause 11 for guidance as an indication of the precision that could be obtained for synthetic hydraulic fluids.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3170:2004, *Petroleum liquids — Manual sampling*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 7537:1997, *Petroleum products — Determination of acid number — Semi-micro colour-indicator titration method*